Ontario

Ministry of Health and Long-Term Care
Public Health Division

Ontario Influenza Bulletin 2006-2007 Season

SURVEILLANCE WEEK 50 (December 10 - December 16), 2006

This issue of the Ontario Influenza Bulletin provides information on the surveillance period from December 10 - December 16, 2006 (week 50). The analysis for this issue occurred on Wednesday December 20, 2006, therefore all data is current to that date unless otherwise specified.

Influenza activity in Ontario during week 50, 2006, was slightly greater compared to the previous week. Twenty-four sporadically occurring cases of influenza A were reported through iPHIS from health units, while one new institutional influenza outbreak was reported. The Central West health regions reported 'localized' influenza activity; Toronto, Central East, Eastern and Southwest regions reported 'sporadic' activity, while remaining regions reported 'no activity' levels.

For a definition of influenza-like illness (ILI) activity levels and links to websites providing current influenza information from other sources, please refer to the attached Appendix- I. If you would like to provide feedback on the Bulletin, please contact Michael Whelan (Michael.whelan@moh.gov.on.ca , 416-327-9174) or Anne-Luise Winter (anne-luise.winter@moh.gov.on.ca, 416-327-7301).

This year has been a very busy one for all of us. Let us all take time out of our busy schedules to reflect on past accomplishments and future goals.
We wish you and your families Seasons Greetings and a safe and healthy New Year.

Seasons Greetings

Please note the *Ontario Influenza Bulletin* will not be published next week. ILI activity levels for week 51 will be included in following weeks Bulletin.

Table 1: Summary of laboratory-confirmed influenza cases and institutional influenza outbreaks by health region, December 10 - December 16 (week 50), 2006.

Lab-confirmed Influenza cases*	HEALTH REGION							TOTAL
	North West	North East	Eastern	Central East	Toronto	South West	Central West	
Influenza A	0	0	1	1	4	1	17	24
Influenza B	0	0	0	0	0	0	0	0
Influenza A & B	0	0	0	0	0	0	0	0
Total new cases	***0***	***0***	***1***	***1***	***4***	***1***	***17***	***24***
Institutional influenza outbreaks‡	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**

SOURCE: MOHLTC [iPHIS, Health Unit Reports to PHD]

* Includes reports of sporadically occurring influenza through iPHIS, as well as cases in institutional outbreaks, with dates of onset in the surveillance period.

‡ Laboratory-confirmed outbreaks in institutions during the surveillance period.

Table 2: Laboratory Confirmed cases of influenza by health unit & health region, with an episode date† between December 10 – December 16 (week 50), 2006.

Region	Health Unit	Laboratory-Confirmed Influenza		
		Influenza A	Influenza B	TOTAL
North West	Northwestern	0	0	0
	Thunder Bay District	0	0	0
	TOTAL NORTH WEST	**0**	**0**	**0**
North East	Algoma	0	0	0
	North Bay Parry Sound District	0	0	0
	Porcupine	0	0	0
	Sudbury & District	0	0	0
	Timiskaming	0	0	0
	TOTAL NORTH EAST	**0**	**0**	**0**
Eastern	Eastern Ontario	0	0	0
	Hastings & Prince Edward Counties	1	0	1
	Kingston, Frontenac, Lennox & Addington	0	0	0
	Leeds, Grenville & Lanark	0	0	0
	Ottawa	0	0	0
	Renfrew	0	0	0
	TOTAL EASTERN	**1**	**0**	**1**
Central East	Durham Region	0	0	0
	Haliburton, Kawartha, Pine Ridge District	1	0	1
	Peterborough County-City	0	0	0
	Simcoe Muskoka District	0	0	0
	York Region	0	0	0
	Peel Region	0	0	0
	TOTAL CENTRAL EAST	**1**	**0**	**1**
Toronto	Toronto	4	0	4
	TOTAL TORONTO	**4**	**0**	**4**
South West	Grey-Bruce	1	0	1
	Elgin-St. Thomas	0	0	0
	Huron County	0	0	0
	Chatham-Kent	0	0	0
	Lambton	0	0	0
	Middlesex-London	0	0	0
	Oxford	0	0	0
	Perth District	0	0	0
	Windsor-Essex County	0	0	0
	TOTAL SOUTHWEST	**1**	**0**	**1**
Central West	Brant	0	0	0
	Haldimand-Norfolk	0	0	0
	Hamilton	13	0	13
	Niagara Region	1	0	1
	Halton Region	0	0	0
	Waterloo Region	1	0	1
	Wellington-Dufferin-Guelph	2	0	2
	TOTAL CENTRAL WEST	**17**	**0**	**17**
	TOTAL ONTARIO	***24***	***0***	***24***

SOURCE: MOHLTC [iPHIS, Health Unit Reports to PHD]

† Episode Date for a case corresponds to the earliest date on record for the case according to the iPHIS hierarchy (Symptom Date > Clinical Diagnosis Date > Specimen Collection Date > Lab Test Date > Reported Date)

Table 3: Cumulative* Laboratory confirmed cases of influenza by health unit & health region with an episode date† between September 1 – December 16, 2006

Region	Health Unit	Laboratory-Confirmed Influenza		
		Influenza A	Influenza B	TOTAL
North West	Northwestern	0	0	0
	Thunder Bay District	0	0	0
	TOTAL NORTH WEST	**0**	**0**	**0**
North East	Algoma	0	0	0
	North Bay Parry Sound District	0	0	0
	Porcupine	0	0	0
	Sudbury & District	0	0	0
	Timiskaming	0	0	0
	TOTAL NORTH EAST	**0**	**0**	**0**
Eastern	Eastern Ontario	0	0	0
	Hastings & Prince Edward Counties	1	0	1
	Kingston, Frontenac, Lennox & Addington	0	0	0
	Leeds, Grenville & Lanark	0	0	0
	Ottawa	1	0	1
	Renfrew	0	0	0
	TOTAL EASTERN	**2**	**0**	**2**
Central East	Durham Region	0	0	0
	Haliburton, Kawartha, Pine Ridge District	2	0	2
	Peterborough County-City	0	0	0
	Simcoe Muskoka District	0	0	0
	York Region	2	0	2
	Peel Region	10	1	11
	TOTAL CENTRAL EAST	**14**	**1**	**15**
Toronto	Toronto	17	0	17
	TOTAL TORONTO	**17**	**0**	**17**
South West	Grey-Bruce	3	1	4
	Elgin-St. Thomas	0	0	0
	Huron County	1	0	1
	Chatham-Kent	0	0	0
	Lambton	0	0	0
	Middlesex-London	0	0	0
	Oxford	0	0	0
	Perth District	0	0	0
	Windsor-Essex County	0	0	0
	TOTAL SOUTHWEST	**4**	**1**	**5**
Central West	Brant	0	0	0
	Haldimand-Norfolk	1	0	1
	Hamilton	30	0	30
	Niagara Region	1	0	1
	Halton Region	10	0	10
	Waterloo Region	4	0	4
	Wellington-Dufferin-Guelph	14	0	14
	TOTAL CENTRAL WEST	**60**	**0**	**60**
	TOTAL ONTARIO	***97***	***2***	***99***

SOURCE: MOHLTC [iPHIS, Health Unit Reports have been extracted using CRN at PHD]

* Cumulative case counts include late reports and records that are otherwise reconciled. Therefore, cumulative counts may not equal new cases plus previous cumulative value.

† Episode Date for a case corresponds to the earliest date on record for the case according to the iPHIS hierarchy (Symptom Date > Clinical Diagnosis Date > Specimen Collection Date > Lab Test Date > Reported Date)

Influenza Subtype(s):
No influenza subtyping was reported for week 50.

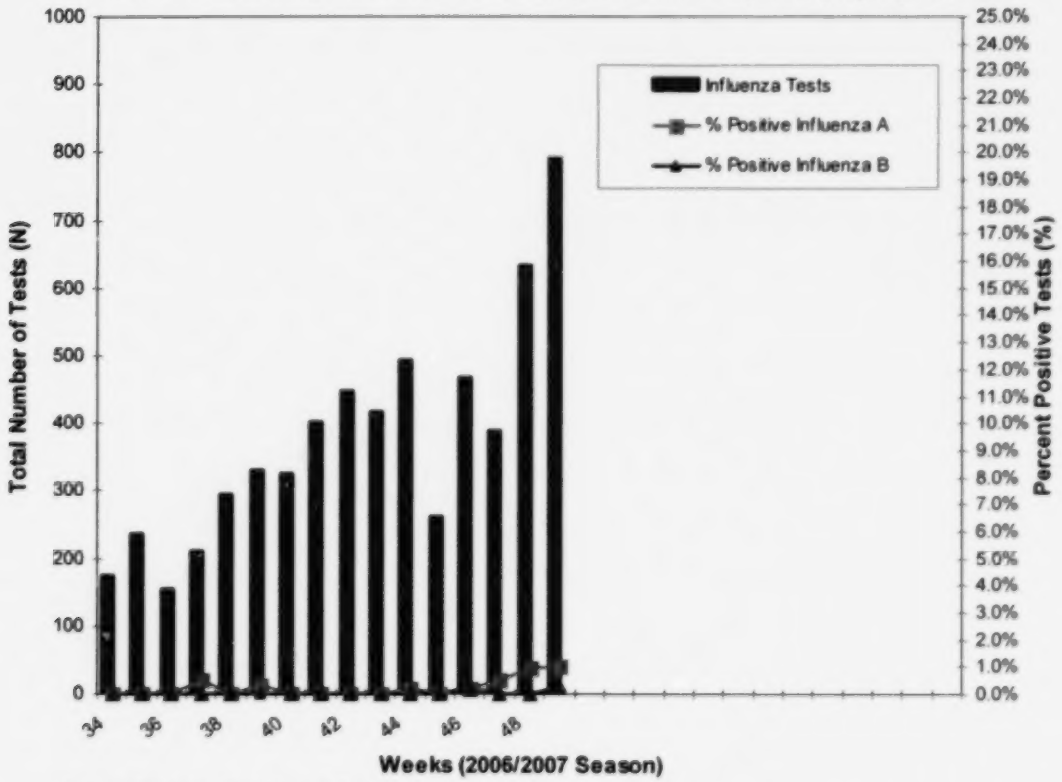
Antigenic Characterization:
The National Microbiology Laboratory (NML) has characterized 33 influenza viruses for the 2006-2007 influenza season: 19 (58%) A/Wisconsin/67/05(H3N2)-like viruses (from Ontario), 13 (39%) A/New Caledonia/20/99(H1N1)-like viruses (from Alberta and British Columbia), and one (3%) B/Malaysia/2506/04-like virus (from Ontario). All three strains are included in the composition of the 2006-2007 Canadian influenza vaccine.**

Antiviral Resistance:
Since the start of the season, the NML has tested 20 influenza A isolates (12 H1N1, 8 H3N2) for amantadine resistance of which 3 (15% - all H3N2) were resistant. None of the 20 influenza A isolates tested were found to be resistant to oseltamivir.**

Note: Based on the World Health Organization recommendations, Canada's National Advisory Committee on Immunization (NACI) recommended the **2006-2007** influenza vaccine contain an **A/New Caledonia-like**, an **A/Wisconsin-like** & a **B/Malaysia-like** virus strain.

* These data have been obtained from the Respiratory Virus Detection tables of Public Health Agency of Canada for week 49, 2006.
** These data have been obtained from the FluWatch report of the Public Health Agency of Canada for week 49, 2006.

Figure 1: Total number of influenza tests performed and percent of positive tests in Ontario reported to the Centre for Infectious Disease Prevention and Control (CIDPC), by report week*.



Source: Public Health Agency of Canada
* Total numbers reported include late reports; therefore totals may not be equal to the sum of the weekly numbers.

Note: Cumulative numbers for season to date are available through FluWatch: http://www.phac-aspc.gc.ca/fluwatch/

Table 4: Institutional respiratory outbreaks in Ontario: New Outbreaks from December 10 – December 16 (Week 50), 2006, and Total Outbreaks from September 1 – December 16, 2006

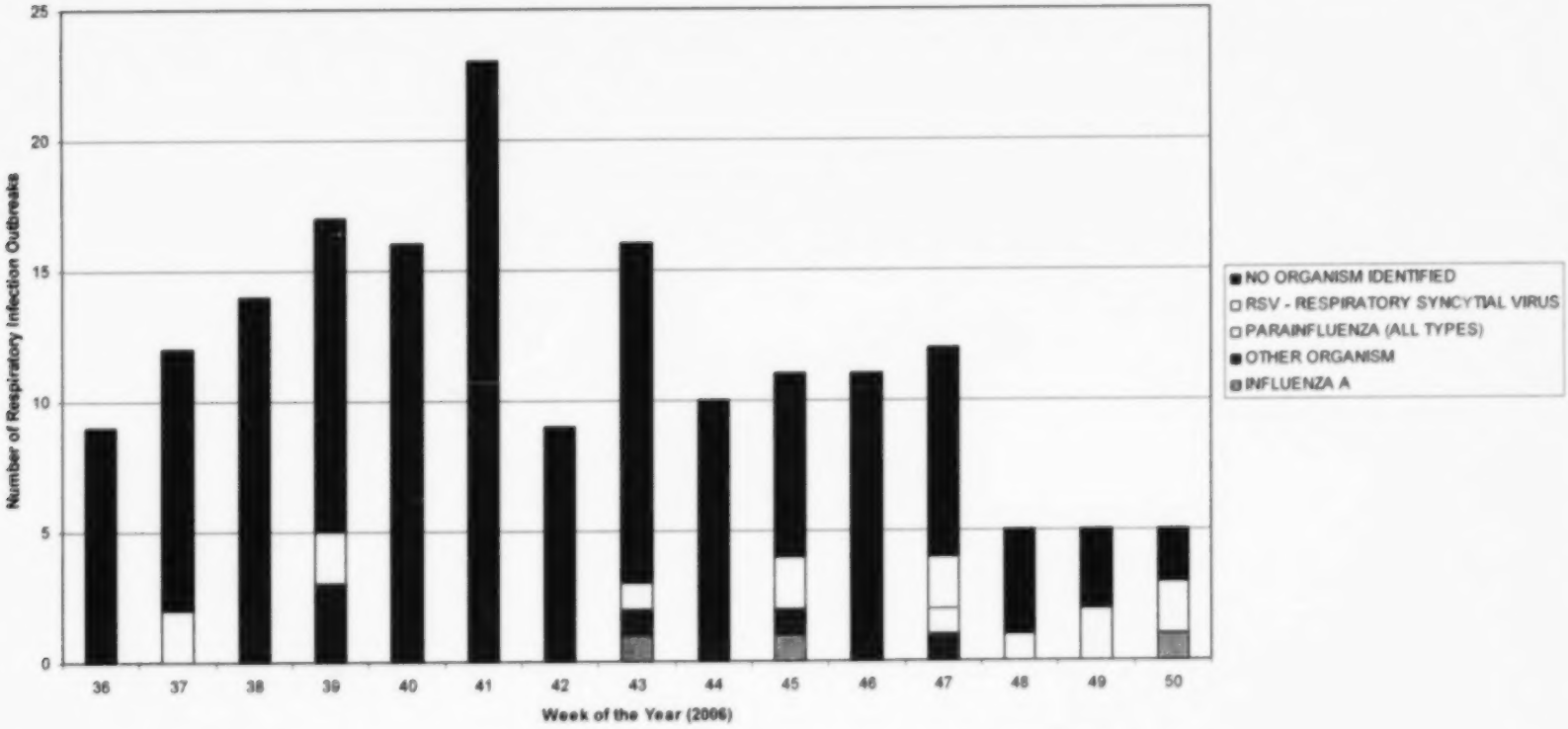
Institutional Respiratory Infection Outbreaks		
New Outbreaks* (Dec. 10 - Dec. 16, 2006)	**N**	**% (of outbreaks)**
Influenza A	1	20.0
Influenza B	0	0.0
Influenza A and B	0	0.0
Parainfluenza (All types)	0	0.0
RSV	2	40.0
Other organisms	0	0.0
No organism identified	2	40.0
TOTAL	***5***	***100***
Total Respiratory Infection Outbreaks of the Season to date (Sep. 1– Dec. 16, 2006)**	**N**	**% (of outbreaks)**
Influenza A	3	1.7
Influenza B	0	0.0
Influenza A and B	0	0.0
Parainfluenza (All types)	8	4.5
RSV	7	4.0
Other organisms	18	10.2
No organism identified	140	79.5
TOTAL	***176***	***100***
**Types of Institutions (All Outbreaks) ** **	**N**	**% (of outbreaks)**
Long-Term Care Homes	6	3.4
Hospitals	0	0.0
Retirement Homes	1	0.6
Other	0	0.0
Unknown	169	96
TOTAL	***176***	***100***
Outbreak Related Complications (All Outbreaks) **	**N**	**% (of total cases)**
Total Cases		
Residents	2024	68.2
Patients	182	6.1
Staff	761	25.6
Total Cases	**2967**	**100**
Deaths		**% (of cases per role)**
Residents	33	1.6
Patients	2	1.1
Staff	0	0.0
Pneumonia (Chest x-ray confirmed)		**% (of cases per role)**
Residents	71	3.5
Patients	1	0.5
Staff	3	0.4
Hospitalizations		**% (of cases per role)**
Residents	59	2.9
Staff	1	0.1

SOURCE: MOHLTC: iPHIS Outbreak Summary

* New outbreaks are those in which the date of onset of illness in the first case occurred and recorded through iPHIS in the current surveillance period; i.e. December 10 – December 16, 2006

** Season to date includes all outbreaks in which the date of onset of illness in the first case occurred from September 1 – December 16, 2006

Figure 2: Institutional respiratory outbreaks in Ontario: Total Outbreaks from September 1 – December 16, 2006* by organism



* Season to date includes all outbreaks in which the date of onset of illness in the first case occurred from September 1 – December 16, 2006

Figure 3: Influenza Activity* levels in Ontario by health unit & health region for week 50 (December 10 - December 16), 2006.

SOURCE: MOHLTC [Provincial Influenza Activity Report (Appendix C) Database]
* Influenza activity levels are assigned by local public health units and reported to the MOHLTC by the Tuesday following the end of the surveillance week at 4 pm. Activity levels are assigned based on laboratory confirmations, ILI reports from various sources, and laboratory-confirmed institutional outbreaks. Please refer to detailed definitions for the 2006-2007 season included in the Appendix-1]

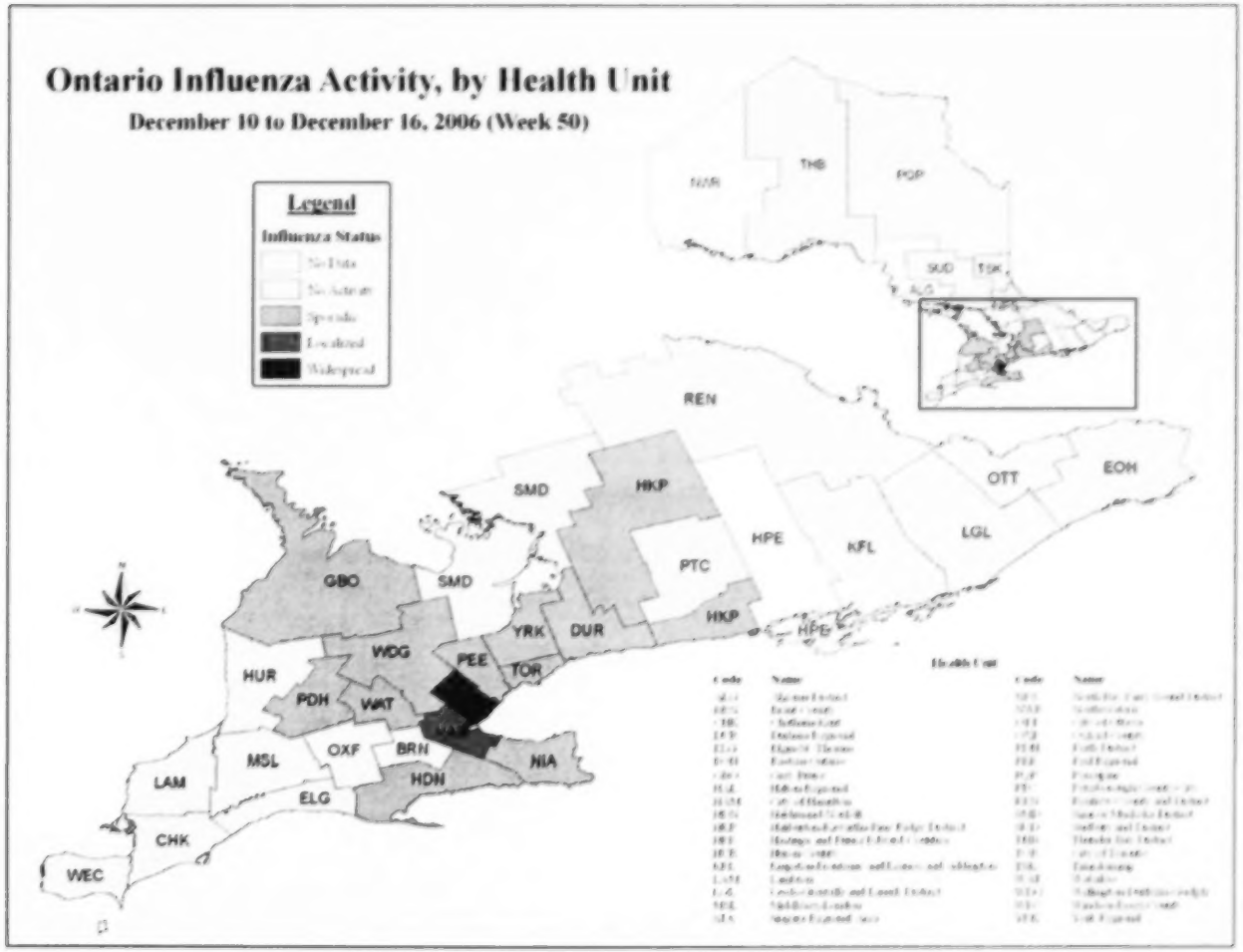
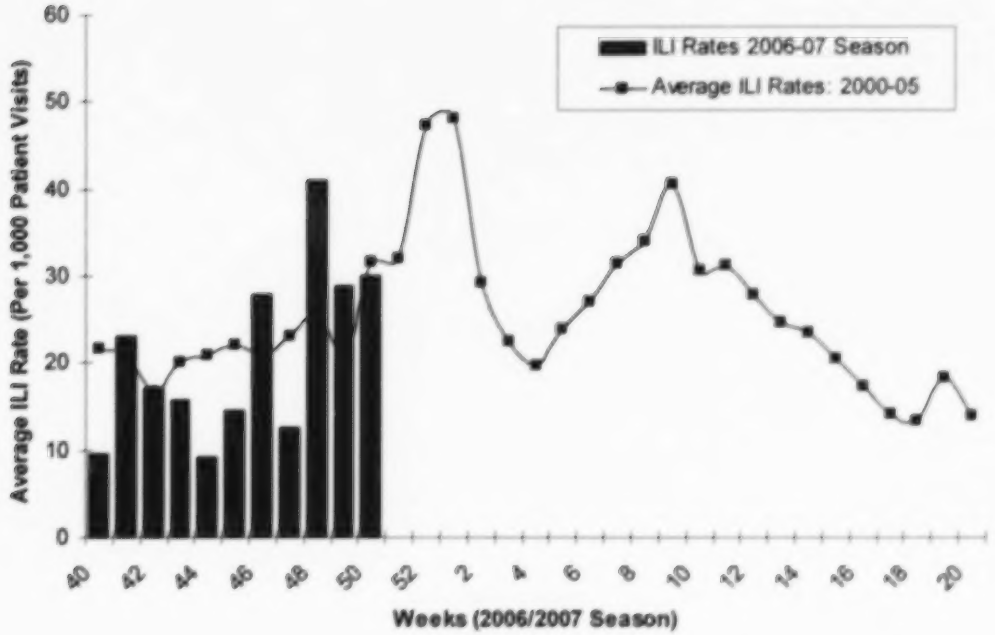


Figure 4: Average influenza-like illness (ILI) consultation rate (per 1,000 patient visits) reported by sentinel physicians* in Ontario in 2006- 2007 season, by report week, Compared to Ontario average† (1999/2000 to 2004/05 seasons).



Source: Public Health Agency of Canada

* Sentinel physician information is reported to Public Health Agency of Canada.

†No data available for mean rate in previous years for weeks 21 to 39 (1999-2000 through 2004-2005 seasons). During weeks 20-39, 2002-2003/2004-2005 seasons, ILI is reported once every two weeks, on even weeks only.

Surveillance week 50, between December 10 - December 16, 2006

Table 5: Average Influenza-like illness consultation rate (per 1,000 patient visits) reported by Sentinel Physicians* in Ontario, by age group and postal code for week 50 (Dec. 10 – Dec. 16), 2006.

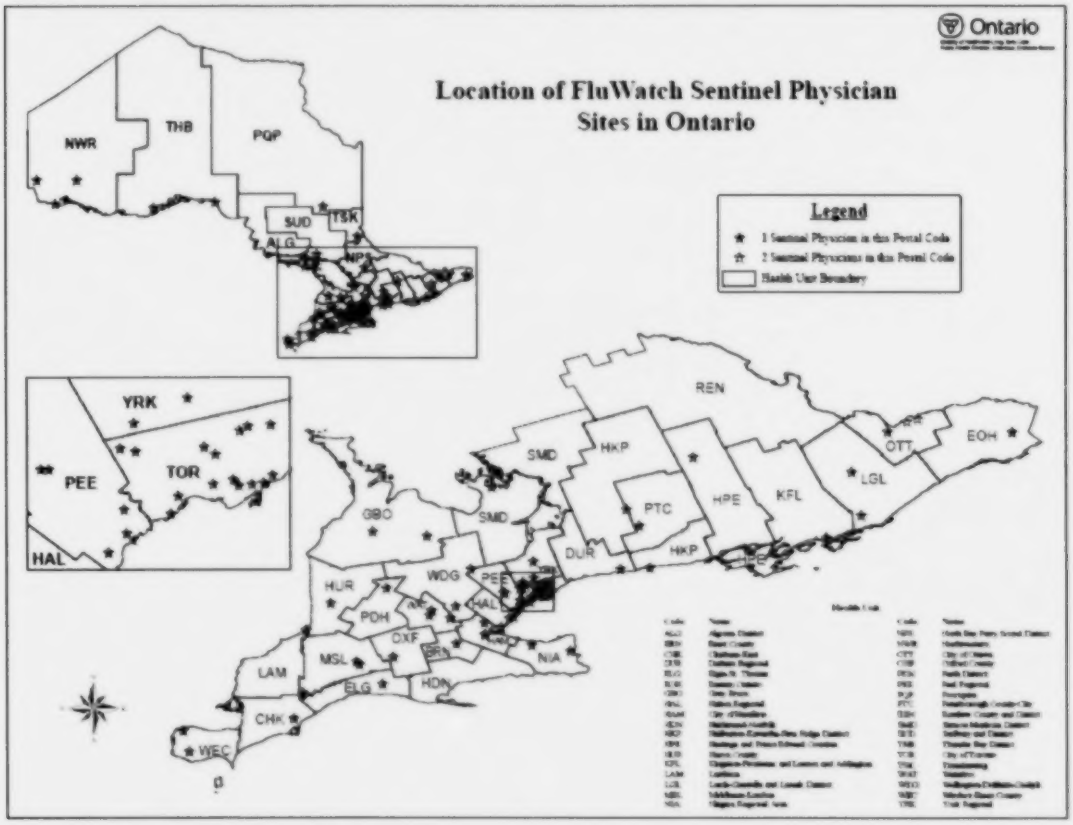
Postal Code	0 – 4	5 – 19	20 – 64	65 +	Unknown
K1J9M2	0	0	0	0	0
K2L3C8	0	1	0	0	0
K2P1V3	0	0	1	0	0
K1J9M2	0	0	0	0	0
K0H2N0	0	0	0	0	0
K7H2W6	0	1	0	0	0
K7L1E9	0	0	0	0	0
K0L1C0	0	0	0	0	0
L1A3W4	0	0	0	0	0
K0L1H0	2	0	0	0	0
K0M1A0	0	0	0	0	0
L1B1H8	0	0	0	0	0
L4J7Y3	0	0	0	0	0
M5M1B2	0	0	0	0	0
M6G4A1	0	0	0	0	0
M4E1V8	0	1	1	0	0
M8Y1W3	0	0	0	0	0
M3H1T1	0	0	1	0	0
M2K1E1	0	0	0	0	0
M9W6N5	0	0	2	0	0
M9W4L6	1	0	2	0	0
M8V2Z5	4	0	1	0	0
L5G3H5	0	0	0	0	0
L5G3H5	0	0	0	0	0
L4Y2N8	0	0	1	0	0
L6W2A4	1	3	2	0	0
L6L1X8	0	0	0	0	0
L7R1M6	0	0	0	0	0
L0R1H0	0	0	0	0	0
L9K2G2	0	0	0	0	0
L0R1B0	3	0	1	2	0
N3C2E2	0	0	0	0	0
N2G1P2	0	0	0	0	0
N2M3B5	1	0	1	0	0
N5C1G5	0	0	0	1	0
N0R1G0	0	0	0	0	0
N0M1T0	0	0	0	0	0
N6C2R5	0	0	0	0	0
N0C1E0	0	0	0	0	0
L4R4P4	0	0	0	0	0
P0M2L0	0	1	4	0	0
P4N1C6	0	0	0	0	0
P7E1H5	0	0	0	0	0
P0T2E0	0	0	1	0	0
P0W1E0	0	0	0	0	0
P9N3W7	0	0	0	0	0
P8N2Z6	0	0	0	0	0
ILI Sum	**12**	**7**	**18**	**3**	**0**
ILI Consultation Rate (per 1,000 patient visits)	**137.93**	**57.85**	**24.06**	**7.89**	**0.00**

Source: Public Health Agency of Canada

* Sentinel physician information is reported to the Public Health Agency of Canada

Note: The small numbers of sentinel physicians reporting at the local level make the ILI rates unstable. Please interpret these data correspondingly.

Figure 5: Geographic Distribution of Sentinel Physicians in Ontario



Source: Public Health Agency of Canada
* Sentinel physician information is reported to the Public Health Agency of Canada

FURTHER INFORMATION

1. Ontario Ministry of Health and Long-Term Care
   Previous issues of the *Ontario Influenza Bulletin* can be accessed at:
   http://www.health.gov.on.ca/english/providers/program/pubhealth/flu/flu_05/flubul_mn.html

2. Public Health Agency of Canada
   Issues of FluWatch can be accessed at:
   www.phac-aspc.gc.ca/fluwatch/

3. United States Centers for Disease Control and Prevention
   www.cdc.gov/flu/

INFORMATION ABOUT AVIAN INFLUENZA

For latest information on the status of avian influenza worldwide please use the following link:

Public Health Agency of Canada
http://www.phac-aspc.gc.ca/h5n1/index.html

APPENDIX - I

Definitions for influenza activity levels:

No Data: No activity report corresponding to the surveillance week was received at the Ministry of Health and Long-Term Care Call Centre by the Tuesday (at 4 p.m.) following the end of the surveillance period.

No Activity: No laboratory confirmed* influenza cases(s) or outbreak detected during the past four weeks within the influenza surveillance region, however, sporadically occurring **ILI** may be reported†

Sporadic: Sporadically occurring **ILI and laboratory confirmed influenza* case(s) with NO outbreaks** detected within the influenza surveillance region†

Localized: sporadically occurring **ILI and laboratory confirmed influenza* case(s) together with outbreaks of ILI** in schools and/or worksites or laboratory confirmed influenza in residential institutions occurring **in less than 50% of the influenza surveillance region(s)**†

Widespread: sporadically occurring **ILI and laboratory confirmed influenza* case(s) together with outbreaks of ILI** in schools and/or worksites or laboratory confirmed influenza in residential institutions occurring **in greater than or equal to 50% of the influenza surveillance region(s)**†

* Confirmation of influenza within the surveillance region at any time within the prior week
† Sub-regions within the province or territory as defined by the provincial/territorial epidemiologist

Influenza-Like Illness (ILI) Definitions:

A) ILI in the general population:

Acute onset of respiratory illness with fever and cough and with one or more of the following - sore throat, arthralgia, myalgia, or prostration which could be due to influenza virus. In children under 5, gastrointestinal symptoms may also be present. In patients under 5 or 65 and older, fever may not be prominent.

B) ILI/Influenza outbreaks:

Schools and work sites: greater than 10% absenteeism on any day, most likely due to ILI.

Residential institutions: two or more cases of ILI within a seven-day period, **including at least one laboratory-confirmed case**.

Influenza Surveillance Weeks 2006-2007 and date of submission of Appendix C

WEEKS	START	END	Appendix C Submission to MOHLTC
51	17-Dec-06	23-Dec-06	28-Dec-06
52	24-Dec-06	30-Dec-06	2-Jan-07
2007 begins			
1	31-Dec-06	6-Jan-07	9-Jan-07
2	7-Jan-07	13-Jan-07	16-Jan-07
3	14-Jan-07	20-Jan-07	23-Jan-07
4	21-Jan-07	27-Jan-07	30-Jan-07
5	28-Jan-07	3-Feb-07	6-Feb-07
6	4-Feb-07	10-Feb-07	13-Feb-07
7	11-Feb-07	17-Feb-07	20-Feb-07
8	18-Feb-07	24-Feb-07	27-Feb-07
9	25-Feb-07	3-Mar-07	6-Mar-07
10	4-Mar-07	10-Mar-07	13-Mar-07
11	11-Mar-07	17-Mar-07	20-Mar-07
12	18-Mar-07	24-Mar-07	27-Mar-07
13	25-Mar-07	31-Mar-07	3-Apr-07
14	1-Apr-07	7-Apr-07	10-Apr-07
15	8-Apr-07	14-Apr-07	17-Apr-07
16	15-Apr-07	21-Apr-07	24-Apr-07
17	22-Apr-07	28-Apr-07	1-May-07
18	29-Apr-07	5-May-07	8-May-07
19	6-May-07	12-May-07	15-May-07
20	13-May-07	19-May-07	22-May-07
21	20-May-07	26-May-07	29-Jun-07
22	27-May-07	2-Jun-07	5-Jun-07
23	3-Jun-07	9-Jun-07	12-Jun-07
24	10-Jun-07	16-Jun-07	19-Jun-07
25	17-Jun-07	23-Jun-07	26-Jun-07
26	24-Jun-07	30-Jun-07	3-Jul-07
27	1-Jul-07	7-Jul-07	10-Jul-07
28	8-Jul-07	14-Jul-07	17-Jul-07
29	15-Jul-07	21-Jul-07	24-Jul-07
30	22-Jul-07	28-Jul-07	31-Aug-07
31	29-Jul-07	4-Aug-07	7-Aug-07
32	5-Aug-07	11-Aug-07	14-Aug-07
33	12-Aug-07	18-Aug-07	21-Aug-07
34	19-Aug-07	25-Aug-07	28-Sep-07
35	26-Aug-07	1-Sep-07	4-Sep-07